

	US ATLAS PHASE II Upgrade BASIS of ESTIMATE (BoE)	Date of Est: 11/16/2015
		Prepared by: R. Schwienhorst
		Docdb #:
WBS number: ???		WBS Title: FOX Fiber Plant
WBS Dictionary Definition: Design and build the Fiber Input/Output system for the Tile Calorimeter inputs to the L1 Calorimeter FEX systems. This will be an optical fiber plant consisting of splitters and connectors.		
Estimate Type (check all that apply – see BOE Report for estimate type by activity): <input type="checkbox"/> Work Complete <input type="checkbox"/> Existing Purchase Order <input type="checkbox"/> Catalog Listing or Industrial Construction Database <input type="checkbox"/> Documented Vendor Estimate based on Drawings/ Sketches/ Specifications <input checked="" type="checkbox"/> Engineering Estimate based on Similar Items or Procedures <input checked="" type="checkbox"/> Engineering Estimate based on Analysis <input checked="" type="checkbox"/> Expert Opinion		
Supporting Documents (including but not limited to):		

Details of the Base Estimate (explanation of the Work)

This BOE covers the cost of the specification, design and testing of the optical fiber plant which distributes the digital optical signals from the ATLAS tile calorimeter to the L1 Calorimeter trigger. This tile fiber plant re-distributes the optical signals to the appropriate connectors of the existing FEX fiber plant. This procedure will require the mapping of fiber outputs to allow distribution to eFEX, jFEX and gFEX modules. The cost estimate presented here includes the production fiber plant as well as the engineering labor required for the specification, design and testing of the fiber plant.

Travel costs are not included in the fiber plant budget, as the responsible engineers is based at CERN.

A cost summary is tabulated below.

	Material [\$]	Travel [\$]	Engineer [hr]	Tech [hr]	Physicist [hr]
Design	-	-	420	-	50*
Production	41,000	-	420	-	50*

* off-project